



A GUIDE

to help you get the most
out of your visit to the

1967 DESIGN ENGINEERING SHOW

& Concurrent
ASME Conference
New York Coliseum
May 15-18, 1967

Clapp & Poliak, Inc.
341 Madison Avenue
New York, N. Y. 10017

A GUIDE

to help you get the most
out of your visit to the

VISIT BOOTH 4623

DRAKE MFG. CO.,

Indicator Lights - Lenses
& Lampholders

New York Coliseum

May 15-18

FIRST CLASS



1967 DESIGN

ENGINEERING

SHOW & Concurrent

ASME Conference

New York Coliseum

May 15-18, 1967

Interlocking Systems Co.

Mr. T. Nelson, Sys. Eng.

Box 1546

Poughkeepsie, N. Y.

You'll find everything you need in materials, parts, components and finishes at the 1967 Design Engineering Show

Four days at the show can save you weeks, if not months, of product investigation. You can see, try and compare hundreds of new ideas in materials, parts, components and finishes *all in one place, all at one time.*

Bring your design problems to the show. Bring your sketches, blueprints and specs. Talk to exhibitors' application engineers, men who understand your problem and are willing and able to help you work out a solution to it.

Over 30,000 product designers and executives attended the 1966 show. Among them were:

ENGINEERING

Directors of Engineering, Chief Engineers
Research and Development Engineers
Product, Design and Project Engineers
Methods, Systems and Process Engineers
Industrial and Planning Engineers
Consulting Engineers and Analysts
Chief Draftsmen, Technicians

PRODUCTION

Production Managers
Plant Managers
Plant Engineers

MANAGEMENT

Owners, Presidents
Vice Presidents, General Managers
Treasurers, Controllers and Secretaries
Division and Department Managers

MARKETING

Marketing Managers
Sales Managers
Sales Engineers

PURCHASING

Purchasing Agents and Buyers

Over 550 top manufacturers will exhibit at the show

The 1967 show will be the largest in the 15-year history of the show with over 550 leading companies exhibiting. Many companies are listed in more than one product category. The number of exhibitors in each category is a good index of the scope of the show:

106 exhibitors will show Metals

93 will show Non-Metallic Materials

156 Mechanical Components

140 Electrical and Electronic Components

105 Hydraulic and Pneumatic Components

116 Power Transmission Equipment

103 Shapes and Forms

101 Fasteners and Adhesives

39 Finishes and Coatings

53 Engineering Services and Equipment

Make your plans *now* to attend. Mail the enclosed card to request Rapid Registration Cards for yourself and your associates.

Don't miss the ASME Conference

The concurrent Design Engineering Conference, sponsored by the Machine Design Division, American Society of Mechanical Engineers, is the largest and most successful engineering meeting in the country. Last year, over 5,400 engineers and executives attended the conference.

If you are interested in the important changes that are taking place in product design today, and the trends which are shaping the designs of tomorrow, make your plans *now* to attend the 1967 conference.

An outline of the 1967 Conference Program appears on pages 13 through 17 of this booklet. For your final Conference Program, including speakers' names, just mail the enclosed card.

EXHIBITORS*

For your convenience, exhibitors are listed alphabetically under major product and service categories. Some exhibitors may appear under more than one category.

Mechanical Components

A & A Manufacturing Company, Inc.
AMG Industries
The Allen Manufacturing Company
American Chain & Cable Company, Inc.
American Pamcor, Inc.
Amerock Corporation
Ametek, Inc.
Hunter Spring Div.
Lamb Electric Div.
U.S. Gauge Div.
Anaconda Metal Hose
B. Appleton & Co., Inc.
Arguto Oilless Bearing Co.
Ashworth Bros., Inc.
Associated Spring Corporation
The Auburn Manufacturing Company
Audubon Metalwove Belt Division

Balcrank, A Division of
The Wheelabrator Corp.
Barry Controls
The Baskick Co.
Bausch & Lomb Inc.
Beemer Engineering Company
Berkeley Machine Corp.
The Bristol Company, Socket Screw Div.
Brockway Pressed Metals, Inc.
The Bunting Brass & Bronze Company
Burgess-Norton Mfg. Co.

Caterpillar Tractor Co.
Cellasto, Inc.
Chemplast, Inc.
Chicago Powdered Metal Products Co.
Cleveland Worm & Gear Division,
Eaton Yale & Towne, Inc.
Clevite Corporation
Aerospace Division
Cleveland Graphite Bronze Division
Harris Division
Clyde Corporation
Columbus Auto Parts Co.
Commercial Cam & Machine Company
Coors Porcelain Company
Corbin Cabinet Lock Div.,
Emhart Corp.

De-Sta-Co Corporation
Diebel Manufacturing Co.
Dimco-Gray Company
Dixon Sinterloy Inc.
Dynamaco Division,
Eaton Yale & Towne Inc.
Dynamic Gear Company Inc.

ENM Company, Inc.
Eaton Yale & Towne Inc.
Emerson Plastics Corporation
Engelhard Industries, Inc.
Eriez Magnetics

The Fafnir Bearing Company
Faultless Caster Co.
Ferguson Machine Company, Div. of
Universal Match Corporation
Formsprag Company
Fulton Sylphon Division,
Robertshaw Controls Company

Garlock, Inc.
Garlock-Nadella
Gemco Electric Company
B. F. Goodrich Industrial Products Co.
Greene, Tweed & Co.
Gries Reproducer Co., Division of
Coats & Clark Inc.

Hall & Hall Ltd.
Hartford Precision Products Co.
The Heim Universal Corporation
Heyman Manufacturing Company
Hoke Inc.
Huck Manufacturing Company
Hunter Spring,
A Division of Ametek, Inc.

Industrial Shoe Machinery Corp.
Industrial Tectonics Inc.
Instrument Specialties Company, Inc.
Insulating Shapes, Inc.

Jackson Fluid Power Co.
Janney Cylinder Company, Subsidiary of
Edgewater Steel Company
The Jeffrey Manufacturing Company
Jergens Tool Specialty Co.
Johns-Manville Corporation

The Kaydon Engineering Corporation
Kilian Mfg. Corp.

Lakeland Manufacturing Co.
Laminated Shim Company, Inc.
The Lamson & Sessions Co.
Lapeer Manufacturing Company
Leiman Bros., Inc.
Lignum-Vitae Products Corporation
Division—Non-Metallic Bearings Co.
Linear Motion Components, Inc.
Lowell Wrench Company

Mallory Metallurgical Company,
A Division of P. R. Mallory & Co., Inc.
L. Frank Markel & Sons
Marlin-Rockwell Division of TRW Inc.
The Marquette Metal Products Co.
McGill Manufacturing Company, Inc.
Bearings Division
Mechanical Power Transmission Div.,
Eaton Yale & Towne Inc.
Merriman Inc.
Miniature Precision Bearings, Inc.
Moeller Mfg. Co., Inc.
Morse Controls Inc.

National Forge Company,
Pressure Systems Division
National Radio Company, Inc.
New Departure-Hyatt Bearings Division,
General Motors Corporation
New Hermes Engraving Machine Corp.
Nice Ball Bearing Company
W. H. Nichols Company
Non-Metallic Bearings Company, Div. of
Lignum-Vitae Products Corporation
Norma-Hoffmann Bearings Co., Div.
Universal American Corporation

Ohio Seamless Tube Division of
Copperweld Steel Company
Orange Roller Bearing Co., Inc.

Parker White Metal Company
Pennsylvania Fluorocarbon Co., Inc.
Penntube Plastics Co., Inc., Div. of
Pennsylvania Fluorocarbon Co., Inc.
Perfection American Inc.
Perfection Spring & Stamping Corp.
Pic Design Corp.
Polyflon Corporation
The Polymer Corporation
Precision Products & Controls, Inc.

Ramsey Corporation
Randall Bearings, Inc.
Raybestos-Manhattan, Inc.

Remington Arms Company, Inc.,
Hi-Dense Parts Division
Rex Chainbelt, Inc.
M. H. Rhodes Inc.
Robertshaw Controls Company
Fulton Sylphon Division
Rollway Bearing Co., Inc.
Subsidiary of Lipe-Rollway Corp.

SECS Inc.
SKF Industries, Inc.
Saginaw Steering Gear Div.,
General Motors Corporation
Scully International Inc.
Sealmaster Bearing Division,
Stephens-Adamson Mfg. Co.
Sealol, Inc.
Security Plastics, Inc.
Sier-Bath Gear Co., Inc.
Simmons Fastener Corp.
Spaulding Fibre Co., Inc.
The Spencer Turbine Co.
Standard-Thomson Corporation,
Control Products Div.
Wm. Steinen Mfg. Co.
Sterling Instrument Company
Stoffel-Polygon
Sylvania Electric Products Inc./
Parts Division
Symmco, Inc.

Taylor Corporation
Technical Development Co.
Teleflex, Inc.
Templeton, Kenly & Company
Thomson Industries, Inc.
Tol-O-Matic Inc.
The Torrington Company
The Torrington Manufacturing Company

United Shoe Machinery Corporation,
General Industry Group

Veeder-Root Inc.
Viking Pump Company
Vlier Engineering Corporation

William Wahl Corporation
Waldron-Hartig Division,
Midland-Ross Corporation
Waters Manufacturing, Inc.
S. S. White Company, Inc.,
Industrial Division
E. B. Wiggins, Inc.

Power Transmission Equipment

Acme Chain Corporation
Airborne Accessories Corp.
Anaconda Metal Hose
Arguto Oilless Bearing Co.

BMB Corp.
Baldor Electric Co.
Ball Screws Inc.
The Bendix Corporation
Fluid Power Division
Motor Components Division
Browning Manufacturing Company
The Buehler Corporation
The Bunting Brass & Bronze Company

Christian Manufacturing Engineers
Chrysler Outboard Corp.
Cleveland Worm & Gear Division,
Eaton Yale & Towne, Inc.
Clevite Corporation
Aerospace Division
Cleveland Graphite Bronze Division
Harris Division
Columbus Auto Parts Co.

Commercial Cam & Machine Company
Cooper Split Roller Bearing Corp.
Cullman Wheel Company
Cycledynamics Incorporated

Daido Corporation
Diamond Chain Company
Dodge Manufacturing Corporation
Duff-Norton Company
Dynamatic Division,
Eaton Yale & Towne Inc.

Eaton Yale & Towne Inc.
Eclipse Machine Division, Bendix Corp.
Electro Counter & Motor Co.
Electrofilm, Inc.

The Fafnir Bearing Company
Fairbanks Morse, Inc., Engine
Accessories Operation
Fairchild Hiller Corp.,
Industrial Products Division
Fawick Airflex Division, Fawick Corp.
Ferguson Machine Company, Div. of
Universal Match Corporation
Fluid Power Division, The Bendix Corp.
Force Control, Inc.
Formsprag Company
Fulton Sylphon Division,
Robertshaw Controls Company

Geartronics Corporation
Genbearco International Corporation
General Bearing Company
General Electric Company
B. F. Goodrich Industrial Products Co.
Graham Engineering Co.
Graham Transmissions, Inc.

Hayden Trans-Cooler Co.
The Heim Universal Corporation
The Hilliard Corporation
Hoover Bearing Division,
Hoover Ball & Bearing Co.
Horton Manufacturing Co., Inc.

Illinois Tool Works, Inc.

The Jeffrey Manufacturing Company
The Joyce-Cridland Company

Leiman Bros., Inc.
Linear Motion Components, Inc.
Link-Belt Company

MacPherson Control Products, Inc.
Marlin-Rockwell Division of TRW Inc.
The Marquette Metal Products Co.
Maurey Manufacturing Corporation
McGill Manufacturing Company, Inc.
Bearings Division

Mechanical Power Transmission Div.,
Eaton Yale & Towne Inc.
Mercury Clutch Division,
Automatic Steel Products, Inc.
Moeller Mfg. Co., Inc.
Morse Chain Company
Morse Controls Inc.
Motor Components Division,
The Bendix Corporation

New Departure-Hyatt Bearings Division,
General Motors Corporation
Norma-Hoffmann Bearings Co., Div.
Universal American Corporation

The Polymer Corporation
Precision Specialties, Inc.
Printed Motors, Inc.

Ramsey Corporation
Ramsey Products Corporation
Randall Bearings, Inc.
Raybestos-Manhattan, Inc.
Reliance Electric & Engineering Co.
Renold Chains Limited
Rex Chainbelt, Inc.
Robertshaw Controls Company
Fulton Sylphon Division
Rollway Bearing Co., Inc.,
Subsidiary of Lipe-Rollway Corp.

SKF Industries, Inc.
Scully International Inc.
Sealmaster Bearing Division,
Stephens-Adamson Mfg. Co.
Sier-Bath Gear Co., Inc.
Simplatrol Products Corp.
Standard-Thomson Corporation,
Control Products Div.
Stearns Electric Corporation
Stow Manufacturing Co., Inc.
Sumitomo Machinery Corp. of America

EXHIBITORS (continued)

Templeton, Kenly & Company
Thomson Industries, Inc.
The Timken Roller Bearing Company
Tol-O-Matic Inc.
Torque Transmission Div.,
Rampe Mfg. Co.
The Torrington Company
Turner Uni-Drive Company
20th Century Machine Co.
Twin Disc Clutch Company

United Shoe Machinery Corporation,
General Industry Group
U. S. Electrical Motors, Div. of
Emerson Electric Co.
U. S. Rubber Company, Consumer &
Industrial Products Div.

Vickers Incorporated
Georg Von Opel Corporation

Waldron-Hartig Division,
Midland-Ross Corporation
Warner Electric Brake & Clutch Co.
The Weatherhead Company
The WER Industrial Corporation
S. S. White Company, Inc.,
Industrial Division
Wichita Clutch Company, Inc.
Winsmith Div., UMC Industries, Inc.
T. B. Wood's Sons Co.

The Zero-Max Company

Electrical and Electronic Components

Acro Division, Robertshaw Controls Co.
The Adams & Westlake Company
Agastat Division,
Elastic Stop Nut Corporation
of America

Airpax Electronics, Inc.
American Chain & Cable Company, Inc.
Ametek, Inc.

Lamb Electric Div.
Anaconda Metal Hose
Anderson Controls
The Arrow-Hart & Hegeman Electric Co.
The Auburn Manufacturing Company
Automatic Timing & Controls, Inc.
Auto-Ponents

Baldor Electric Co.
Bausch & Lomb Inc.
H. Braun Tool & Instrument Co., Inc.
Brevle Products Corporation
Buchanan Electrical Products Corp.

Cavtron Ultrasonics, Inc.
Centralab, Division of Globe Union Inc.
Chemplast, Inc.
Cherry Electrical Products Corporation
Chicago Powdered Metal Products Co.
Circle F Industries
Clevite Corporation
Brush Instruments Division
Columbus Electric Manufacturing Co.
Coors Porcelain Company
Cramer Division,
Giannini Controls Corporation
Croname, Inc.
Curtis Development & Mfg. Co.

Deltrol Corp.
Demag Hoists & Cranes Corp.
Diebel Manufacturing Co.
Digital Equipment Corp.
Dimco-Gray Company
Dixon Sintaloy Inc.
Drake Manufacturing Company
E. I. du Pont de Nemours & Co., Inc.
Elastomer Chemicals Department
Durakool, Inc.

Dynamatic Division,
Eaton Yale & Towne Inc.

ENM Company, Inc.
ETC Incorporated
Eagle Signal Division, E. W. Bliss Co.
Eaton Yale & Towne Inc.
Electro Counter & Motor Co.
Electro-Craft Corporation
Emerson Plastics Corporation
Engelhard Industries, Inc.

The Fafnir Bearing Company
Fenwal Incorporated
Franklin Electric Co., Inc.
Furnas Electric Company

Gemco Electric Company
General Atomic Division/General
Dynamics Corporation
General Electric Company
General Radio Company
General Time Corporation,
Industrial Controls Division
Giannini Controls Corp.
Globe Industries, Inc.
Gries Reproducer Co., Division of
Coats & Clark Inc.

Hansen Mfg. Co., Inc.
Hart Mfg. Co.
The Hermaseal Co., Inc.
Heyman Manufacturing Company
Hoke Inc.
Howell Electric Motors Co.

ITT General Controls
Illinois Tool Works, Inc.
Industrial Solid State Controls
Industrial Timer Corporation
Instrument Specialties Company, Inc.
Insulating Shapes, Inc.

Janney Cylinder Company, Subsidiary of
Edgewater Steel Company

Lamb Electric,
A Division of Ametek, Inc.
Laminated Shim Company, Inc.
Landis & Gyr, Inc.
Leecraft Mfg. Co., Inc.
Linemaster Switch Corporation

Mallory Metallurgical Company,
A Division of P. R. Mallory & Co., Inc.
L. Frank Markel & Sons
Master Specialties Company
McGill Manufacturing Company, Inc.
Electrical Division
Melco Products, Inc.
Miller-Harris Instrument Co.
Milwaukee Relays, Inc.

National Beryllia Corp.
National Radio Company, Inc.

Panduit Corp.
Parker White Metal Company
Pennsylvania Fluorocarbon Co., Inc.
Penntube Plastics Co., Inc., Div. of
Pennsylvania Fluorocarbon Co., Inc.
Phillips-Advance Control Co., Div. of
Hart Mfg. Co.
Pic Design Corp.
Pinlites Inc.
Polyflon Corporation
Polygon Plastic Co.
The Polymer Corporation
H. K. Porter Company, Inc.
Electrical Division
Potter & Brumfield Division of
American Machine & Foundry Co.
Precision Products & Controls, Inc.
Printed Motors, Inc.

Ramsey Corporation
Randall Bearings, Inc.
Reliance Electric & Engineering Co.
Reynolds Metals Company
Richco Plastic Co.
Robertshaw Controls Company
Acro Division
Rogan Brothers, Inc.
Rogers Corporation
The Milton Ross Co.
Rotron Mfg. Co., Inc.

Scully International Inc.
Simplatrol Products Corp.
The Singer Company, Diehl Division
Spaulding Fibre Co., Inc.
Standard-Thomson Corporation,
Control Products Div.
The Superior Electric Company
Sylvania Electric Products Inc./
Parts Division
Syracuse Electronics Corp.

Taylor Corporation
Texas Instruments, Inc.,
Materials Div.
Semiconductor-Components Div.
The Thomas & Betts Co., Inc.
Tri-Point Industries, Inc.

Unimax Switch Division,
Maxson Electronics Corp.
Union Carbide Corp.
United Shoe Machinery Corporation,
General Industry Group
U. S. Electrical Motors, Div. of
Emerson Electric Co.

Veeder-Root Inc.
Georg Von Opel Corporation
Vulcan Electric Company

William Wahl Corporation
Warner Electric Brake & Clutch Co.
Watlow Electric Manufacturing Co.
Waynco, Inc.
The WER Industrial Corporation
O. C. White Company
Edwin L. Wiegand Co.
E. B. Wiggins, Inc.
Winsmith Div., UMC Industries, Inc.

Yaskawa Electric Mfg. Co., Ltd.

Metals

Acme Products Division,
Interlake Steel Corporation
Acme Rivet & Machine Corp.
Alcan Metal Powders, Inc.
Aluminum Company of America
American Iron and Steel Institute
Committee of Rod and Drawn Wire
Producers
American Metal Climax, Inc.
American Nickeloid Company
American Smelting and Refining Co.
Armco Steel Corporation
Atomerig Chemetals Co., Division of
Gallard-Schlesinger Chemical
Mfg. Corp.
Avis Industrial Corp.

The Barden Corporation
Beemer Engineering Company
Bermo, Inc.
The Beryllium Corporation
J. Bishop & Co. Platinum Works
Brockway Pressed Metals, Inc.
The Bunting Brass & Bronze Company

Casting Engineers
Central Foundry Division,
General Motors Corporation
W. M. Chace Co.
Chemtree Corporation
Chicago Powdered Metal Products Co.
The Cincinnati Shaper Company

Clevite Corporation
Brush Instruments Division
Climax Molybdenum Company
Consolidated Astronautics, Inc.
Continental-Emsco Company
Copper Development Association Inc.

Dahlstrom Manufacturing Corp.
Dixon Sintaloy Inc.
Doehler-Jarvis Division,
National Lead Company
Domtar Chemicals Ltd.,
Metal Powders Division

Easton Metal Powder Company, Inc.
Engelhard Industries, Inc.
Engineered Sinterings and Plastics, Inc.

Fansteel Metallurgical Corporation
Federal-Mogul Division,
Federal-Mogul Corporation

Garlock-Nadella
The Glidden Company, Metals Div.
Gray & Ductile Iron Founders'
Society, Inc.
Greenback Industries, Inc.

Handy & Harman
Charles Hardy Div., Chemetals Corp.
The H. M. Harper Company
Harper Electric Furnace Corporation
Hitchiner Manufacturing Co., Inc.
Hoeganaes Corporation
Hydromet Division,
Olson Mfg. Co. Inc.

Inland Steel Company
The International Nickel Company, Inc.
International Powder
Metallurgy Co., Inc.

James Steel & Tube Co.,
Div. of Avis Industrial Corp.
Janney Cylinder Company, Subsidiary of
Edgewater Steel Company
The Jeffrey Manufacturing Company
Jones & Laughlin Steel Corporation,
Stainless and Strip Division

Kennametal Inc.
Kester Solder Co.
Keystone Drawn Steel Co. (A Subs. of
La Salle Steel Company)

Laminated Shim Company, Inc.
La Salle Steel Company
Lead Industries Association, Inc.
Lindberg/Hevi-Duty Div.,
Metallurgical Group,
Basic Products Corporation
Litho Strip Corporation

The Malayan Tin Bureau
Mallory Metallurgical Company,
A Div. of P. R. Mallory & Co., Inc.
Mannesmann-Meer, Inc.
Melling Forging Co., Div. of
Avis Industrial Corp.
Metal-Cal, A Division of
Avery Products Corp.
Metal Powder Industries Federation
Metal Textures and Coatings Company
Metalex Corporation
Metallurgical International Inc.

National Forge Company,
Pressure Systems Division
The New Jersey Zinc Co.

Ohio Seamless Tube Division of
Copperweld Steel Company

Parker White Metal Company
Chas. Pfizer & Co., Inc., Minerals,
Pigments & Metals Division
H. K. Porter Company, Inc.
Fabricated Metal Products Division
Powder Alloys Corp.

EXHIBITORS (continued)

Precision Extrusions, Inc.
Production Cold Forming, Div. of
Avis Industrial Corp.

Randall Bearings, Inc.
Raybestos-Manhattan, Inc.
Republic Steel Corporation
Reynolds Metals Company
Rhovac, Inc.
Rigidized Metals Corporation

Sabco, Screw & Bolt Corporation of
America
St. Joseph Lead Company
A. O. Smith Corporation,
Standard Stamping & Perforating Co.
Superior Tube Company

Texas Instruments, Inc., Materials Div.
Arthur Tickle Engineering Works, Inc.
Tin Research Institute Inc.
The Torrington Manufacturing Co.
Twin Industries Corporation, A Div. of
The Wheelabrator Corp.

U. S. Bronze Powders, Inc.
United States Steel Corp.
Universal Casting Corp.

Valley Metallurgical Processing Co.,
Inc. of New Jersey

Western Gold & Platinum Company
Whittaker Corporation,
Nuclear Metals Division
Willow Hill Industries, Inc., Div. of
Avis Industrial Corp.

Non-Metallic Materials

Acheson Colloids Co., A Div. of
Acheson Industries, Inc.
Adhesive Products Corp.
Aircro Plastics Products
Allied Chemical Corp., Plastics Div.
American Agile Co.
American Cyanamid Company,
Plastics & Resins Div.
American Pamcor, Inc.
American Smelting and Refining Co.
B. Appleton & Co., Inc.
Arguto Oilless Bearing Co.
Atlantic India Rubber Works, Inc.
Atomergic Chemetals Co., Division of
Gallard-Schlesinger Chemical
Mfg. Corp.
The Auburn Manufacturing Company
Avison Corporation

Bausch & Lomb Inc.
Beemer Engineering Company

Cadillac Plastic & Chemical Co.
Celanese Plastics Company
Cellasto, Inc.
Centralab, Div. of Globe Union Inc.
Chemplast, Inc.
The Cincinnati Shaper Company
Connecticut Hard Rubber Co.
Coors Porcelain Company

The Datak Corporation
Dayco Corporation
Dixon Corporation
Dodge Fibers Corporation
Donray Products Company
Dow Corning Corporation
E. I. du Pont de Nemours & Co., Inc.
Elastomer Chemicals Department
Film Department
Plastics Department
Textile Fibers Department

Easthampton Rubber Thread Co.,
Molded Products Division
Eastman Chemical Products, Inc.,
Chemicals Division
Emerson Plastics Corporation

Fabcel Division, Fabreka Products
Company, Inc.
Fibercast Company
Fiberfil, Inc.
Foamade Industries

Garlock-Nadella
General Electric Company
General Plastics Corporation
The General Tire & Rubber Co.,
Chemical/Plastics Divisions
Glass Laboratories, Inc.
B. F. Goodrich Aerospace & Defense
Products
B. F. Goodrich Industrial Products Co.
Greene, Tweed & Co.

Hall & Hall Ltd.
Hysol Corporation

Insulating Shapes, Inc.

Lignum-Vitae Products Corporation,
Div.—Non-Metallic Bearings Co.
Liquid Nitrogen Processing Corp.

Marbon Chemical Division,
Borg-Warner Corporation
L. Frank Markel & Sons
Masonite Corporation
Minnesota Mining & Manufacturing Co.
Mobay Chemical Company

NVF Company
National Beryllia Corp.
Non-Metallic Bearings Co., Div. of
Lignum-Vitae Products Corporation

The Oak Rubber Company

Panelyte Industrial Div. of
Thiokol Chemical Corp.
Pennsylvania Fluorocarbon Co., Inc.
Penntube Plastics Co., Inc., Div. of
Pennsylvania Fluorocarbon Co., Inc.
Chas. Pfizer & Co., Inc., Minerals,
Pigments & Metals Division
Polyflon Corporation
Polygon Plastic Co.
The Polymer Corporation

Raybestos-Manhattan, Inc.
Richco Plastic Co.
Rogers Corporation
Rohm and Haas Co.

Scott Paper Company, Foam Division
Seilon, Inc., Plastics Division
Sparta Manufacturing Company
Spaulding Fibre Co., Inc.
Standard Stamping & Perforating Co.
Synthane Corporation

Tadco Manufacturing, Inc.
Taylor Corporation
Thermoplastic Processes, Inc.
Three M Company
Tri-Point Industries, Inc.

Union Carbide Corp.
U. S. Rubber Company,
Consumer & Industrial Products Div.
The United States Stoneware Co.

William Wahl Corporation
Western Gold & Platinum Company
Westlake Plastics Company
Witco Chemical Co., Inc.
Wollensak Division, Minnesota Mining
& Manufacturing Company

Fasteners and Adhesives

Acme Products Division,
Interlake Steel Corporation
Acme Rivet & Machine Corp.
The Allen Manufacturing Company
American Chain & Cable Company, Inc.
Ametek, Inc.,
Hunter Spring Div.
Armstrong Products Co., Inc.
The Auburn Manufacturing Company
Avdel Corporation

Berkeley Machine Corp.
W. H. Brady Co.
Branson Sonic Power, A Division of
Branson Instruments Inc.
The Bristol Co., Socket Screw Div.
The Buehler Corporation

Camcar Screw & Mfg. Co.
Camloc Fastener Corp.
Carr Fastener Co., Division of
United-Carr Incorporated
Cavitron Ultrasonics, Inc.
Cherry Rivet Division, Townsend Co.
Chicago Rivet & Machine Co.
Continental Screw Company
Corbin Cabinet Lock Div., Emhart Corp.

Deutsch Fastener Corporation
Dimco-Gray Company
Dow Corning Corporation
E. I. du Pont de Nemours & Co., Inc.
Explosives Department
Dzus Fastener Co. Inc.

Eastman Chemical Products, Inc.,
Chemicals Division
Eaton Yale & Towne Inc.
Elastic Stop Nut Corporation of
America
Elco Tool and Screw Corporation
Engineered Fasteners Division,
Townsend Company

The Ferry Cap & Set Screw Co.

B. F. Goodrich Aerospace & Defense
Products
Gries Reproducer Co., Division of
Coats & Clark Inc.
Groov-Pin Corporation

The H. M. Harper Company
The Hartwell Corporation
Heli-Coil Corporation
Heyman Manufacturing Company
Hi-Shear Corporation
Huck Manufacturing Company
Hunter Spring,
A Division of Ametek, Inc.
Hysol Corporation

Illinois Tool Works, Inc.
Industrial Shoe Machinery Corp.

Jergens Tool Specialty Co.

KSM Division, Omark Industries, Inc.
Kelox Industries (a subsidiary of
Phillips Screw Company)

The Lamson & Sessions Co.
Lapeer Manufacturing Company
Loctite Corporation
Long-Lok Corporation

MacLean-Fogg Lock Nut Company
Marson Fastener Corp.
Metal-Cal, A Division of
Avery Products Corp.
Milford Rivet & Machine Co.
Minnesota Mining & Mfg. Co.
Moeller Mfg. Co., Inc.

National Lock Co.
The National Lock Washer Co.
National Radio Company, Inc.
The National Screw & Mfg. Co.
Newton Insert Company

The Ohio Nut & Bolt Co., Div. of
Fastener Industries, Inc.

Penn Engineering & Mfg. Corp.
Philadelphia Steel & Wire Corp.
Phillips Screw Company
(Phillips International Division)
Pic Design Corp.

Ramsey Division, Olin Mathieson
Chemical Corporation
Ramsey Corporation
Raybestos-Mannattan, Inc.
Reed & Prince Mfg. Co.
Reliance Division,
Eaton Yale & Towne Inc.
Rosan, Inc.
Russell, Burdall and Ward Bolt
and Nut Co.

Sabco, Screw & Bolt Corp. of
America
Scovill Manufacturing Company,
Blind Rivets Closure Division
Simmons Fastener Corp.
Southco Div., South Chester Corp.
Standard Pressed Steel Co.
Star Expansion Co.
Star Stainless Screw Company
Steloc Fastener Co.
Edwin B. Stimpson Company, Inc.

TRS Division, Townsend Company
J. L. Thomson Rivet & Machine Div.
Judson L. Thomson Mfg. Co.
Three M Company
Tinnerman Products, Inc.
The Torrington Manufacturing Co.
Townsend Company
Cherry Rivet Division
Engineered Fasteners Division
TRS Division

United-Carr Incorporated
United Shoe Machinery Corporation,
General Industry Group

Velcro Corporation

Weckesser Co., Inc.
Westline Products
S. B. Whistler & Sons, Inc.
Witco Chemical Co., Inc.
Wittek Mfg. Co.
Wollensak Division, Minnesota Mining
& Manufacturing Company

Finishes and Coatings

American Nickeloid Company
American Smelting and Refining Co.
Armstrong Products Co., Inc.
Arvin Metal Laminates, Division of
Arvin Industries, Inc.
Atomergic Chemetals Co., Division of
Gallard-Schlesinger Chemical
Mfg. Corp.

Ballotini Division, Potters Bros., Inc.
The Beryllium Corporation

Chemplast, Inc.
Columbus Coated Fabrics Co., Div. of
Borden Chemical Company
Croname, Inc.

The Datak Corporation
Dow Corning Corporation
E. I. du Pont de Nemours & Co., Inc.
Elastomer Chemicals Department
Teflon Department

General Electric Company
General Plastics Corporation

Hysol Corporation

The International Nickel Co., Inc.

EXHIBITORS (continued)

Mallyclad Corporation
The Masland Dura-leather Company
Metal-Cal, A Division of
Avery Products Corp.
Metal Textures and Coatings Co.
Minnesota Mining & Mfg. Co.

National Sinter-Seal Co., Division of
N. B. Newcomb Co., Inc.

The Oak Rubber Company

Pennsylvania Fluorocarbon Co., Inc.
Penntube Plastics Co., Inc., Div. of
Pennsylvania Fluorocarbon Co., Inc.
Poloron Products, Inc.
The Polymer Corporation

Selectrons, Ltd.
Sparta Manufacturing Company

Teleflex, Inc.
Three M Company
Arthur Tickle Engineering Works, Inc.
Tin Research Institute Inc.
Tri-Point Industries, Inc.

United Shoe Machinery Corporation,
General Industry Group

Witco Chemical Co., Inc.
Wollensak Division, Minnesota Mining
& Manufacturing Company

Shapes and Forms

AMG Industries
Adhesive Products Corp.
Airco Plastics Products
Alloy Products Corp.
American Agile Co.
American Chain & Cable Co., Inc.
American Machine & Foundry Co., Inc.
American Metal Climax, Inc.
American Smelting and Refining Co.
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Ametek, Inc.,
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Atomergic Chemetals Co., Division of
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Avis Industrial Corp.

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Bingham Stamping, A Division of
Universal American Corporation
The Buehler Corporation
The Bunting Brass & Bronze Co.

Cadillac Plastic & Chemical Co.
Casting Engineers
Cellasto, Inc.
Chemplast, Inc.
Chemtree Corporation
Columbus Auto Parts Co.

Dayco Corporation
Diebel Manufacturing Co.
Dixon Sinterloy Inc.
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Metal Powders Division
Donray Products Company

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Minnesota Rubber Company

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The New Jersey Zinc Co.
The Oak Rubber Company

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The Polymer Corporation
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The United States Stoneware Co.

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Wheeling Steel Corporation
Willow Hill Industries, Inc., Div. of
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Witco Chemical Co., Inc.
Wollensak Division, Minnesota Mining
& Manufacturing Company

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American Pamcor, Inc.
Anaconda Metal Hose
Ametek, Inc.,
U.S. Gauge Div.
Anderson Controls
B. Appleton & Co., Inc.
Applied Power Industries, Inc.
The Auburn Manufacturing Company
Autoclave Engineers, Inc.
Auto-Ponents
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Callahan Mining Corporation

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Eastern Industries
Eaton Yale & Towne Inc.
Enerpac, An Activity of Applied
Power Industries, Inc.

The Fafnir Bearing Company
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Industrial Products Division
Farval Div., Eaton Yale & Towne Inc.
Flick-Reedy Corp., Miller Fluid
Power Division
Fluidonics, Division of
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Fulton Syphon Division,
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The Heim Universal Corporation
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Martin Engineering Company
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Morse Controls Inc.

National Forge Company,
Pressure Systems Division
Nuclear Products Company

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Specialties Division
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Parker Seal Co.
Plastic & Rubber Products Co.
Polyflon Corporation
The Polymer Corporation
Power Packer, An Activity of Applied
Power Industries, Inc.

Ramsey Corporation
Randall Bearings, Inc.
Raybestos-Manhattan, Inc.
Reliance Electric & Engineering Co.
Republic Manufacturing Company
Rex Chainbelt, Inc.
Rivett, Inc., An Applied Power Industry
Robertshaw Controls Company
Fulton Syphon Division

Scovill Manufacturing Company,
Blind Rivets Closure Division
Sealol, Inc.
Skinner Precision Industries, Inc.
Snap-Tite Inc.
Sparta Manufacturing Company
Stratoflex, Inc.
Sunnyhill Research & Mfg. Co.
Superior Tube Company

Taylor Corporation
Tektro, An Activity of Applied
Power Industries, Inc.
Templeton, Kenly & Company
Tol-O-Matic Inc.
Tri-Point Industries, Inc.

U.S. Gauge,
A Division of Ametek, Inc.

Vickers Incorporated
Viking Pump Company
Vlier Engineering Corporation
William Wahl Corporation
The Weatherhead Company

Whitey Research Tool Co.
E. B. Wiggins, Inc.

Engineering Equipment and Services—Publications

AC Compacting Presses Inc.
Addressograph-Multigraph Corp.
American Society of Mechanical
Engineers
B. Appleton & Co., Inc.

Chilton Co.

EXHIBITORS (continued)

Drever Company
Dur-O-Lite Pencil Company

Eastman Kodak Co.,
Business Systems Market
Encyclopaedia Britannica
Essex Engineering Co., Inc.

Florida Development Commission

The General Fireproofing Co.

Hahn & Kolb
Hall & Hall Ltd.
Hamilton Manufacturing Company
Hassenfeld Bros., Inc.
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Information Handling Services, Inc.

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Mayline Company, Inc.
Mechanical Engineering
Metalworking News
Minnesota Mining & Mfg. Co.

National Sinter-Seal Co., Division of
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The Oak Rubber Company

Pacific Data Systems, Incorporated
Pennsylvania Fluorocarbon Co., Inc.

Penntube Plastics Co., Inc., Div. of
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Electronic Products Division
Plan Hold Corporation
Frederick Post Company
Product Design & Development

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Rotolite

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Selectrons, Ltd.
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Stokes Equipment Division,
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CONCURRENT ASME DESIGN ENGINEERING CONFERENCE

SPONSORED BY THE MACHINE DESIGN DIVISION
AMERICAN SOCIETY OF MECHANICAL ENGINEERS

AMERICANA HOTEL, NEW YORK, N. Y.

May 15-18, 1967

This is a preliminary program subject to change.
For a copy of the final program, complete with
speakers' names, just mail the enclosed card.

MONDAY MORNING, MAY 15

9:30 a.m. to 12:00 noon

concurrent sessions

Session 1 Designing Noise and Vibration Out of Equipment

- a. Reducing Noise Created by Ball Bearings
in Machine Design
- b. Transmission Noise Control—Approaches in
Helicopter Design
- c. Vibrational Problems With High-Speed
Turbomachinery

Session 2 Frontiers in Design Engineering—Developing "Man-Mechanical" Machines

- a. Mechanism Cybernetics—Augmenting Man's
Capabilities by Transmission of Human Sensory
Information Through Manipulator Mechanisms
- b. AMF Versatran

Session 3 Utilizing Properties of Powder Metallurgy Parts to Design Advantage

- a. "Tailored" Properties Through Powder Metallurgy
- b. What Controllable Density Offers to the Design Engineer
- c. Fatigue Properties of P/M Parts

Session 4 Encouraging the Growth of the Engineer

- a. The Relative Roles of Specialist and Generalist in
Engineering
- b. How Much Freedom of Activity for the Technical Person
- c. Continuing Education for the Design Engineer

Session 5 Welding Developments

- a. Electroslag Welding—Evaluating Pressure Vessel
Applications
- b. Plasma Arc Welding
- c. Friction Welding

Session 6 Designing Equipment for Limited Warfare

- a. The Weaknesses of and Requirements for Ground Equipment
- b. The Weaknesses of and Requirements for Airborne Equipment
- c. The Weaknesses of and Requirements for Naval Equipment

Session 7 Design and Analysis Calculations With Conversational Computers

- a. A Conversational Mode Computing System for Engineering Design
- b. System Design Studies Using Conversational Computation
- c. Application of Conversational Mode Computation in Design
- d. Engineering Education Using the Conversational Computing System

MONDAY EVENING, MAY 15

7:30 p.m. to 9:30 p.m.

concurrent sessions

Session 8 Applications of Honeycomb Materials

- a. Energy Absorption Characteristics of Paper Honeycomb
- b. Expandable Metal Honeycombs for High Temperature, Load Bearing Structures

Session 9 Designing Machine Structures

- a. Analyzing Dynamic Characteristics of Machine Structures in Operation
- b. Identifying Sources of Error in Machine Tools

Session 10 The UFO Phenomenon—Perspective and Scientific Speculation

- a. Unidentified Flying Objects—An Historical Perspective
- b. Evaluating Extreme Movements of UFOs and Postulating an Explanation of Effect of Forces on Their Maneuverability

Session 11 Relationship of Product Planning to Design Engineering

- a. Role of Product Planner in Setting Product Specifications
- b. Contribution of the Industrial Designer to Product Design

Session 12 Selecting Materials for Tomorrow's Products

- a. Materials of Construction for Desalination Plants—A Review
- b. An Evaluation of Materials for Use in Supersonic Transport

Session 13 Advances in the Application of Plastics

- a. Performance of Plastics in Water Environments
- b. Monofilament Structural Composites
- c. High Production Techniques for Precision Plastic Parts

Session 14 Pressure Vessel Design for Undersea Research

- a. "Benthos"—Deep Submergence Pyroceram Test Vehicle
- b. "Divear II"—High Strength Aluminum Submersible

TUESDAY MORNING, MAY 16

9:00 a.m. to 12:00 noon

concurrent sessions

Session 15 Whisker Strengthened Materials

- a. Ceramic Fibre—Cast Aluminum Alloy Composites
- b. Preparation and Working of Whisker Reinforced Metal Composites
- c. Whisker Strengthened Plastics

Session 16 Materials Testing for Design Applications

- a. Using Designed Experiments
- b. Role of Ultrasonics and Radiography in Upgrading Quality of Weldments, Castings and Forgings
- c. Infrared Optics for Evaluating Dynamic Mechanical Components

Session 17 Seals in Design

- a. Advances in Dynamic Seal Technology
- b. Weighing Advantages of Sealing and Hydrostatic Concepts for Reciprocating Pistons
- c. Face Seals for Rotating Applications

Session 18 High Impact Technology

- a. Significance of High Impact Technology on Future Space Programs
- b. Current Status of Design Accomplishments for Shock Levels of 10,000 g's
- c. An Analytical and Empirical Approach to Design Components

Session 19 Supervising the Work of a Smaller Engineering Department

- a. Organizing and Controlling Projects by Simplified Computer Programs
- b. Cost Estimating of Design Projects
- c. Minimizing Turnover of Engineers

Session 20 Methods for Teaching the Use of Computers to Engineers

- a. The Computer in the Classroom—A Design Problem Application
- b. Applications of On-Line Computation in Engineering Classrooms

Session 21 The Factors of Cost and Quality in the Use of Powder Metal Parts

- a. Achieving Quality Assurance With P/M Parts
- b. Design Versus Cost in P/M Parts
- c. Expanding P/M Parts Applications Through Secondary Machining

LUNCHEON SESSION

TUESDAY AFTERNOON, MAY 16

12:30 p.m. to 2:15 p.m.

LUNCHEON SESSION Changes in the Patent Office and Patent Procedures and Their Significance for the Design Engineer

TUESDAY EVENING, MAY 16

7:30 p.m. to 9:30 p.m.

concurrent sessions

Session 22 Fluidics

- a. Application of Fluidics to Sensing and Controlling Fluid Phenomena
- b. Problems in Converting to Fluidic Controls

Session 23 Predicting Fatigue Behavior of Steel

- a. Observation of Fatigue Deformation in Contact Loading
- b. Use of Cyclic Stress-Strain Curves in Design

Session 24 Design Application With Unusual Materials

- a. Light Weight Structural Designs with Advanced Composites
- b. Hexagonal Structures for Reducing Friction and Wear

Session 25 Unique Approaches to Drafting Systems

- a. Paste Up and Opaque Projection Techniques
- b. Numerical Control for Drafting Systems

Session 26 Increasing Design Engineering Capabilities

- a. Organizing for the Full Utilization of Design Engineers
- b. The Role of the Design Engineer Supervisor

Session 27 Developing Mechanical Components

- a. Developing Low Cost, Accurate Mechanical Timing Movements
- b. Designing Mechanical Components for Underwater Use

WEDNESDAY MORNING, MAY 17

9:00 a.m. to 12:00 noon

concurrent sessions

Session 28 Alternative Methods of Creating Incremental Motion

- a. Stepping Motors
- b. High Speed Incremental Motions Generated by Moving Coil Motors
- c. Rotary Solenoids

Session 29 Designing for Bio-Medical Engineering

- a. Design Aspects of Orthopedic Implants
- b. Survey of Circulatory Assist Devices
- c. Designing to Meet the Challenges in Prosthetics

Session 30 Mechanical Fasteners in Design Engineering

- a. Assuring Secure Assemblies with Mechanical Fasteners
- b. Corrosion of Ferrous Fasteners and Their Coatings
- c. Design Considerations at High Temperatures

Session 31 Product Design Through the Engineering Analysis of Its End Use—An Approach and a Case History

- a. The Engineering Analysis of a Product
- b. The Development of a Mathematical Tool for Evaluating Golf Club Performance
- c. The Mechanical Simulation of a Man Performing the Golf Swing

Session 32 Battery Powered Mechanical Equipment

- a. Gearing for Battery Powered Devices in Consumer vs. Industrial Applications
- b. Selecting Motors
- c. Energy Cell Selection With Related Circuits

Session 33 A Design Engineering System in Research and Development Programs

- a. Estimating the Schedule and Budget to Accomplish the Technical Task
- b. Design Layout Methods and Design Shortcuts
- c. Developing Effective Working Relationships Within the Department and With Other Departments

Session 34 Designing Satellite Borne Instruments

- a. Simulating Satellite Conditions for Test Purposes
- b. Designing With Beryllium
- c. Designing Rocket Borne Instrumentation for Upper Atmosphere Analysis

THURSDAY MORNING, MAY 18

9:00 a.m. to 12:00 noon

concurrent sessions

Session 35 Electroplated Coatings—Designing Parts for Better Plating

- a. Selecting the Proper Plated Finish
- b. The Relationship of Shape to Effectiveness of Plating
- c. Surface Preparation for Plated Finishes
- d. Specifying and Testing Plated Finishes

Session 36 Design of Deep Submergence Vehicles

- a. Evaluating Mechanical and Corrosion Suitability of Materials
- b. Tensor Arm Manipulator Design
- c. A Full Scale Lighter Than Air Submarine Simulator System for Deep Diving Rescue Operations

Session 37 Use of Glass Fibre Reinforced Thermosets and Thermoplastics

- a. Properties of RTP Materials
- b. Considerations in Applying Injection Molded Fibreglass RTP to Product Design
- c. Glass Fibre Thermosets for Large Size Forms

Session 38 Aerospace Pyrotechnic Mechanisms and Meteoroid Shielding Design

- a. High Explosive Cutting Mechanisms
- b. Pyrotechnic Thruster Pressure Operated Systems
- c. Designing for Meteoroid Impact

Session 39 Electronics and the Design Engineer

- a. Removing Heat From High Density Packaged Electronics
- b. Flexible Printed Circuitry for High Stress Applications
- c. Integrated Circuits in Computer Applications

Session 40 Making Better Use of Value Engineering

- a. Modern Principles of Value Engineering
- b. Using Value Engineering in Initial Stages of Design
- c. Relating Requirements for Testing to Its Cost, Value and Product Function

Session 41 Air Cushion and Air Film Devices

- a. Design Principles for Air Cushion Devices
- b. Creating Free Horizontal Movement
- c. Promising Applications of the Air Cushion Vehicle

Facts about the Show

Location: New York Coliseum
Dates: May 15-18, 1967
Hours: Monday 10:00 a.m. to 6:00 p.m.
Tuesday 10:00 a.m. to 6:00 p.m.
Wednesday 10:00 a.m. to 6:00 p.m.
Thursday 10:00 a.m. to 4:00 p.m.

Registration: Admittance to the 1967 Design Engineering Show is by registration only. There is a \$2.00 registration fee payable *only* at the Registration Desk in the New York Coliseum. Children are *not* admitted.

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Facts about the Conference

Location: Americana Hotel, New York City
Dates: May 15-18, 1967
Hours:

Monday, May 15 — 9:30 a.m. to 12:00 noon
7:30 p.m. to 9:30 p.m.
Tuesday, May 16 — 9:00 a.m. to 12:00 noon
7:30 p.m. to 9:30 p.m.
Wednesday, May 17 — 9:00 a.m. to 12:00 noon
Thursday, May 18 — 9:00 a.m. to 12:00 noon

Registration: Attendance at the 1967 Design Engineering Conference is by registration only. Full conference registration admits you to all sessions of your choice on all four days of the conference. All conference registrants are admitted to the show without payment of additional registration fee. Conference fees are:

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TUESDAY LUNCHEON \$5.00

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TRANSPORTATION

American Airlines is the official carrier for the 1967 Design Engineering Show and Conference. Their local offices will help you make reservations to New York City and they will maintain a service desk at the New York Coliseum for return reservations.

HOTEL ACCOMMODATIONS

Please make your hotel reservations through the Design Engineering Show Housing Bureau, c/o New York Convention and Visitors Bureau, Inc., 90 East 42nd Street, New York, N. Y. 10017. (Telephone 212-687-1300)

Mention the hotel of your choice, specify accommodations you would like (single, twin, suite) and preferred rate, list the names of persons in your party, and dates of arrival and probable departure. You will receive confirmation direct from the hotel.

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